cysteines at position 9 in each sequence (designated SDF-1 $(1\text{-}9)_2$[P2G] with the following sequence: (SEQ ID No. 15) KGVSLSYRC-CRYSLSVGK (SEQ ID No. 15)(i.e. two molecules of SEQ ID No. 15 bonded in a dimer)). Other alternative peptides may for example be selected from the group consisting of peptides: (SEQ ID No. 16) KGVSLSYR-X-RYSLSVGK (SEQ ID No. 17)(i.e. SEQ ID No. 16 and SEQ ID No. 17 bonded in a dimer), that is a dimer of amino acids 1-8, in which the amino acid chains are joined by a linking moiety X (X may be an amino acid like lysine; ornithine or any other natural or unnatural amino acid serving as a linker between each of the arginines at position 8 in each sequence (designated SDF-1 $(1\text{-}8)_2$[P2G]). Here again the notion of beta-turn mimetic was applied either for monomer (SEQ ID No. 13) in this case the following analogues were designated (SEQ ID Nos. 18-28)

Q1

Please replace line 26 of the specification on page 17 with the following rewritten line:

KGVS**P**SYRCPCRFFESH (SEQ ID No. 18)

Please replace line 1 of page 18 with the following rewritten line:

Q2

KGVSL**P**YRCPCRFFESH (SEQ ID No. 19)

Please replace line 3 of page 18 with the following rewritten line:

Q3

KGVSLS**P**RCPCRFFESH (SEQ ID No. 20)

Please replace line 5 of page 18 with the following rewritten line:

KGVSLSY**P**CPCRFFESH (SEQ ID No. 21)

Please replace line 7 of page 18 with the following rewritten line:

KGVS**P***SYRCPCRFFESH (SEQ ID No. 22)

Please replace line 9 of page 18 with the following rewritten line:

KGVSL**P***YRCPCRFFESH (SEQ ID No. 23)

Please replace line 11 of page 18 with the following rewritten line:

KGVSLS**P***RCPCRFFESH (SEQ ID No. 24)

Please replace line 13 of page 18 with the following rewritten line:

KGVSLSY**P***CPCRFFESH (SEQ ID No. 25)

Please replace line 15 of page 18 with the following rewritten line:

KGVS**Btd**YRCPCRFFESH (SEQ ID No. 26)

ηε

Please replace line 17 of page 18 with the following rewritten line:

KGVSL**Btd**RCPCRFFESH (SEQ ID No. 27)

Please replace line 19 of page 18 with the following rewritten line:

KGVSLS**Btd**CPCRFFESH (SEQ ID No. 28)

Please replace line 24 of page 18 with the following rewritten line:

KGVS**P**SYRC (SEQ ID No. 29)

Please replace line 26 of page 18 with the following rewritten line:

KGVSL**P**YRC (SEQ ID No. 30)

Please replace line 28 of page 18 with the following rewritten line:

KGVSLS**P**RC (SEQ ID No. 31)

Please replace line 30 of page 18 with the following rewritten line:

KGVSLSY**P**C (SEQ ID No. 32)

Please replace line 32 of page 18 with the following rewritten line:

KGVS**P***SYRC (SEQ ID No. 33)

Please replace line 34 of page 18 with the following rewritten line:

KGVSL**P***YRC (SEQ ID No. 34)

Please replace line 1 of page 19 with the following rewritten line:

KGVSLS**P***RC (SEQ ID No. 35)

Please replace line 3 of page 19 with the following rewritten line:

KGVSLSY**P***C (SEQ ID No. 36)

Please replace line 5 of page 19 with the following rewritten line:

KGVS**Btd**YRC (SEQ ID No. 37)

Please replace line 7 of page 19 with the following rewritten line:

KGVSL**Btd**RC (SEQ ID No. 38)

Please replace line 9 of page 19 with the following rewritten line:

KGVSLS**Btd**C (SEQ ID No. 39)

Please replace the paragraph beginning at page 19, line 11, with the following rewritten paragraph:

Alternative peptides based on SEQ ID No. 15 are as follows, designated (SEQ ID Nos. 40-50)

Please replace the paragraph beginning at page 20, line 1, with the following rewritten paragraph:

In the same manner analogues based on the SEQ ID No. 16 are as follows, designated SEQ ID Nos. 51-72).

Please replace line 4 on page 21 with the following rewritten line:

terminus, and/or an N-terminal RFFESH (SEQ ID No. 73) sequence motif within 20

Please replace line 7 on page 21 with the following rewritten line:

acids 5-7. Alternative peptides further include the RFFESH (SEQ ID No. 73) motif at

Please replace line 27 on page 21 with the following rewritten line:

KGVSLSYRCPCRFF-GGGG-LKWIQEYLEKALN (SEQ ID No. 74)

Please replace line 28 on page 21 with the following rewritten line:

KGVSLSYRCPCRFFESH-GGGG-LKWIQEYLEKALN (SEQ ID No. 75)

Please replace line 7 on page 22 with the following rewritten line:

KGVSLSYRCPCRFF-$(CH_2)_n$–LKWIQEYLEKALN (SEQ ID No. 76)

Please replace line 8 on page 22 with the following rewritten line:

KGVSLSYRCPCRFFESH-$(CH_2)_n$–LKWIQEYLEKALN (SEQ ID No. 77)

Please replace line 20 on page 22 with the following rewritten line:

KGVS**P**SYRCPCRFF-GGGG-LKWIQEYLEKALN (SEQ ID No. 78)

Please replace line 21 on page 22 with the following rewritten line:

KGVSL**P**YRCPCRFF-GGGG-LKWIQEYLEKALN (SEQ ID No. 79)

Please replace line 22 on page 22 with the following rewritten line:

KGVSLS**P**RCPCRFF- GGGG-LKWIQEYLEKALN (SEQ ID No. 80)

Please replace line 23 on page 22 with the following rewritten line:

KGVSLSY**P**CPCRFF- GGGG-LKWIQEYLEKALN (SEQ ID No. 81)

Please replace line 24 on page 22 with the following rewritten line:

KGVS**P**SYRCPCRFFESH- GGGG-LKWIQEYLEKALN (SEQ ID No. 82)

Please replace line 25 on page 22 with the following rewritten line:

KGVSL**P**YRCPCRFFESH- GGGG-LKWIQEYLEKALN (SEQ ID No. 83)

Please replace line 26 on page 22 with the following rewritten line:

KGVSLS**P**RCPCRFFESH- GGGG-LKWIQEYLEKALN (SEQ ID No. 84)

Please replace line 27 on page 22 with the following rewritten line:

KGVSLSY**P**CPCRFFESH- GGGG-LKWIQEYLEKALN (SEQ ID No. 85)

Please replace line 28 on page 22 with the following rewritten line:

KGVS**P**SYRCPCRFF- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 86)

Please replace line 29 on page 22 with the following rewritten line:

KGVSL**P**YRCPCRFF- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 87)

Please replace line 30 on page 22 with the following rewritten line:

KGVSLS**P**RCPCRFF- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 88)

Please replace line 31 on page 22 with the following rewritten line:

KGVSLSY**P**CPCRFF- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 89)

Please replace line 32 on page 22 with the following rewritten line:

KGVS**P**SYRCPCRFFESH- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 90)

Please replace line 33 on page 22 with the following rewritten line:

KGVSL**P**YRCPCRFFESH- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 91)

Please replace line 1 on page 23 with the following rewritten line:

KGVSLS**P**RCPCRFFESH- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 92)

Please replace line 2 on page 23 with the following rewritten line:

KGVSLSY**P**CPCRFFESH- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 93)

Please replace the paragraph beginning at page 23, line 9, with the following rewritten paragraph:

In other embodiments, leucine (L), Serine (S), tyrosine (Y) or arginine (R) may be substituted with proline-amino acid chimera (**P***) (similar to SEQ ID Nos. 6-9 for the full length SDF-1 antagonist):

Please replace line 13 on page 23 with the following rewritten line:

KGVS**P***SYRCPCRFF- GGGG-LKWIQEYLEKALN (SEQ ID No. 94)

Please replace line 14 on page 23 with the following rewritten line:

KGVSL**P***YRCPCRFF- GGGG-LKWIQEYLEKALN (SEQ ID No. 95)

Please replace line 15 on page 23 with the following rewritten line:

KGVSLS**P***RCPCRFF- GGGG-LKWIQEYLEKALN (SEQ ID No. 96)

Please replace line 16 on page 23 with the following rewritten line:

KGVSLSY**P***CPCRFF- GGGG-LKWIQEYLEKALN (SEQ ID No. 97)

Please replace line 17 on page 23 with the following rewritten line:

KGVS**P***SYRCPCRFFESH- GGGG-LKWIQEYLEKALN (SEQ ID No. 98)

Please replace line 18 on page 23 with the following rewritten line:

KGVSL**P***YRCPCRFFESH- GGGG-LKWIQEYLEKALN (SEQ ID No. 99)

Please replace line 19 on page 23 with the following rewritten line:

KGVSLS**P***RCPCRFFESH- GGGG-LKWIQEYLEKALN (SEQ ID No. 100)

Please replace line 20 on page 23 with the following rewritten line:

KGVSLSY**P***CPCRFFESH- GGGG-LKWIQEYLEKALN (SEQ ID No. 101)

Please replace line 21 on page 23 with the following rewritten line:

KGVS**P***SYRCPCRFF- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 102)

Please replace line 22 on page 23 with the following rewritten line:

KGVSL**P***YRCPCRFF- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 103)

Please replace line 23 on page 23 with the following rewritten line:

KGVSLS**P***RCPCRFF- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 104)

Please replace line 24 on page 23 with the following rewritten line:

KGVSLSY**P***CPCRFF- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 105)

Please replace line 25 on page 23 with the following rewritten line:

KGVS**P***SYRCPCRFFESH- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 106)

Please replace line 26 on page 23 with the following rewritten line:

KGVSL**P***YRCPCRFFESH- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 107)

Please replace line 27 on page 23 with the following rewritten line:

KGVSLS**P***RCPCRFFESH- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 108)

Please replace line 28 on page 23 with the following rewritten line:

KGVSLSY**P***CPCRFFESH- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 109)

Please replace the paragraph beginning at page 24, line 1, with the following rewritten paragraph:

In some embodiments, the peptidomimetics are of BTD (Bicyclo Turned Dipeptide) as described previously for the full length SDf-1 antagonist (SEQ ID Nos. 110-121):

Please replace line 6 on page 24 with the following rewritten line:

KGVS**Btd**YRCPCRFF- GGGG-LKWIQEYLEKALN (SEQ ID No. 110)

Please replace line 7 on page 24 with the following rewritten line:

KGVSL**Btd**RCPCRFF- GGGG-LKWIQEYLEKALN (SEQ ID No. 111)

Please replace line 8 on page 24 with the following rewritten line:

KGVSLS**Btd**CPCRFF- GGGG-LKWIQEYLEKALN (SEQ ID No. 112)

Please replace line 9 on page 24 with the following rewritten line:

KGVS**Btd**YRCPCRFFESH- GGGG-LKWIQEYLEKALN (SEQ ID No. 113)

Please replace line 10 on page 24 with the following rewritten line:

KGVSL**Btd**RCPCRFFESH- GGGG-LKWIQEYLEKALN (SEQ ID No. 114)

Please replace line 11 on page 24 with the following rewritten line:

KGVSLS**Btd**CPCRFFESH- GGGG-LKWIQEYLEKALN (SEQ ID No. 115)

Please replace line 12 on page 24 with the following rewritten line:

KGVS**Btd**YRCPCRFF- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 116)

Please replace line 13 on page 24 with the following rewritten line:

KGVSL**Btd**RCPCRFF- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 117)

Please replace line 14 on page 24 with the following rewritten line:

KGVSLS**Btd**CPCRFF- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 118)

Please replace line 15 on page 24 with the following rewritten line:

KGVS**Btd**YRCPCRFFESH- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 119)

Please replace line 16 on page 24 with the following rewritten line:

KGVSL**Btd**RCPCRFFESH- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 120)

Please replace line 17 on page 24 with the following rewritten line:

KGVSLS**Btd**CPCRFFESH- $(CH_2)_n$ –LKWIQEYLEKALN (SEQ ID No. 121)

Please replace line 8 on page 25 with the following rewritten line:

following analogues were designated (SEQ ID Nos. 122-125).

Please replace the paragraph beginning at page 25, line 10, with the following rewritten paragraph:

In some embodiments, glutamic acid (E) at position 24 may be substituted with aspartic acid (D) and the aspartic acid cyclized with lysine at position 20 or 28 as described previously. In other embodiments, lysine at position 20 or 28 may be substituted with ornithine cyclized with either

aspartic acid or glutamic acid at position 24 as described previously. This kind of substitution followed by cyclisation can be done with all analogues described above (SEQ ID Nos. 78-121).

Please replace the paragraph beginning at page 25, line 17, with the following rewritten paragraph:

Additionally, to form other cyclic rings, lysine may be substituted by leucine (L), or other hydrophobic residues such as isoleucine (I), norleucine (Nle), valine (V), alanine (A), tryptophan (W), or phenylalanine (F). Lysine may also be substituted with methionine, however, methionine oxides and forms a disulphide bond making the peptide synthesis and purification more difficult.

Please replace line 10 of the specification on page 26 with the following rewritten line:
KGVSLSYRCPCRFFGGGGSKPGVIFLTKRSRQV (SEQ ID NO. 126)

Please replace line 11 of the specification on page 26 with the following rewritten line:
KGVSLSYRCPCRFF$(CH_2)_n$ SKPGVIFLTKRSRQV (SEQ ID No. 127)

Please replace line 14 of the specification on page 26 with the following rewritten line:
KGVSLSYRCPCRFFGGGGEEWVQKYVDDLELSA (SEQ ID No. 128)

Please replace line 15 of the specification on page 26 with the following rewritten line:
KGVSLSYRCPCRFF$(CH_2)_n$ EEWVQKYVDDLELSA (SEQ ID No. 129)

Please replace line 16 on page 48 with the following rewritten line:
purging autoreactive or cancerous cells using autologous or allogenic grafts, or

Please replace line 23 on page 49 with the following rewritten line:
QEYLEKALN-COOH (SEQ ID No.1)

Please replace line 24 on page 49 with the following rewritten line:

CTCE9908: $[KGVSLSYR]_2$-K-$CONH_2$ (SEQ ID Nos.130 and 131)

Please replace line 25 on page 49 with the following rewritten line:

CTCE9907: KGVSLSYRC($CONH_2$)-($CONH_2$)CRYSLSVGK (SEQ ID No.132)

Please replace line 26 of the specification on page 49 with the following rewritten line:

CTCE0014: KGVSLSYRCPCRFF-GGGG- LKWIQEYLEKALN- COOH (SEQ ID No.74)

Please replace line 27 of the specification on page 49 with the following rewritten line:

CTCE0018: KGVSLSYRCPCRFF-GGGG- LKWIQEYLEKALN- $CONH_2$ (SEQ ID No.133)

Please replace line 29 of the specification on page 49 with the following rewritten line:

lactamization (SEQ ID No.134)

Please replace line 31 of the specification on page 49 with the following rewritten line:

lactamization (SEQ ID No.135)

Please replace line 32 on page 49 of the specification with the following rewritten line:

CTCE0016: KGVSLSYRCPCRFFESH-GGGG- LKWIQEYLEKALN- COOH (SEQ ID No.75)

Please replace the paragraph beginning at page 50, line 30 of the specification with the following rewritten paragraph:

In Table 1, SDF-1 (G2) is the peptide KGVSLSYRCPCRFFESHVARANVKHLKILNTPACALQIVARLKNNNRQVCIDPKLKWIQ EYLEKALN-COOH (SEQ ID No.1), CTCE9907 is the peptide [KGVSLSYRC-$CONH_2$]$_2$ (SEQ ID No.132), CTCE9908 is the peptide $[KGVSLSYR]_2$K-$CONH_2$ (SEQ ID Nos.130 and 131), CTCE0012 is the peptide KGVSLSYRCPCRFFESHVARANVKHLKILNTPACALQIVARLKNNNRQVCIDPKLKWIQ EYLEKALN-COOH (SEQ ID No.1), CTCE0016 is the peptide KGVSLSYRCPCRFFESH-GGGG-LKWIQEYLEKALN-COOH (SEQ ID No.75), and CTCE0017 is the peptide

KGVSLSYRCPCRFF-GGGG-LKWIQEYLEKALN-$CONH_2$ (SEQ ID No.133)

Please replace the paragraph beginning at page 51, line 23 of the specification with the following rewritten paragraph:

In Figure 2, the Control represents untreated cells, CTCE9907 is the peptide [KGVSLSYRC-$CONH_2$]$_2$ (SEQ ID No.132), CTCE9908 is the peptide [KGVSLSYR]$_2$K-$CONH_2$ (SEQ ID No.130 and 131), CTCE0012 is the peptide KGVSLSYRCPCRFFESHVARANVKHLKILNTPACALQIVARLKNNNRQVCIDPKLKWIQ EYLEKALN-COOH (SEQ ID No.1), CTCE0016 is the peptide KGVSLSYRCPCRFFESH-GGGG-LKWIQEYLEKALN-COOH (SEQ ID No.75), and CTCE0017 is the peptide KGVSLSYRCPCRFF-GGGG-LKWIQEYLEKALN-$CONH_2$ (SEQ ID No.133).

The paragraph beginning at line 13 of the specification on page 51 with the following rewritten line:

In Figure 3, the Control represents untreated cells, CTCE9907 is the peptide [KGVSLSYRC-$CONH_2$]$_2$ (SEQ ID No. 132), CTCE9908 is the peptide [KGVSLSYR]$_2$K-$CONH_2$ (SEQ ID Nos.130 and 131), CTCE0012 is the peptide KGVSLSYRCPCRFFESHVARANVKHLKILNTPACALQIVARLKNNNRQVCIDPKLKWIQ EYLEKALN-COOH (SEQ ID No.1), CTCE0016 is the peptide KGVSLSYRCPCRFFESH-GGGG-LKWIQEYLEKALN-COOH (SEQ ID No.75), and CTCE0017 is the peptide KGVSLSYRCPCRFF-GGGG-LKWIQEYLEKALN-$CONH_2$ (SEQ ID No.133).

In the Claims:

~~Please amend claim 10 as follows:~~

10. (Amended) The method of claim 8, wherein the CXCR4 antagonist peptide is selected from the group consisting of:

a) KGVSLSYRCPCRFFESH (SEQ ID No. 13)

b) KGVSLSYRC (SEQ ID No. 14)

Please amend claim 11 as follows: